

## Session 4. Water and Agriculture

Improvement ameliorative  
conditions of the irrigated land in  
Central Asia with application of  
innovative technologies  
(Draft)

Question: How can transdisciplinary as well as  
science and practice can boost rational use of water  
for Agriculture?

**Goal:** Achievement of the sustainable agricultural production in Central Asia via increasing the productivity of irrigated lands for improvement socio-economic conditions of the region.

**Objectives:**

- Monitoring and assessment (data collection: database), comprehensive literature review of the current conditions of the irrigated lands in the region at the sub-basin level
- Modelling, analysis and work out methodologies for the increasing the productivity of the irrigated lands
- Introduction and demonstration innovative approaches and technologies of irrigation including, water-energy saving technologies, amelioration improvement (fitomelioration), water accounting, data transmission, agronomic, return water use, GIS/RS maps and etc.
- Work-out economic mechanisms for application of the proposed approaches and technologies as well as incentives for water savings
- Dissemination of the knowledge, technologies and best practices, uptake by decision makers as well as improvement of water governance at sub-basin level
- Impact assessment of the project results

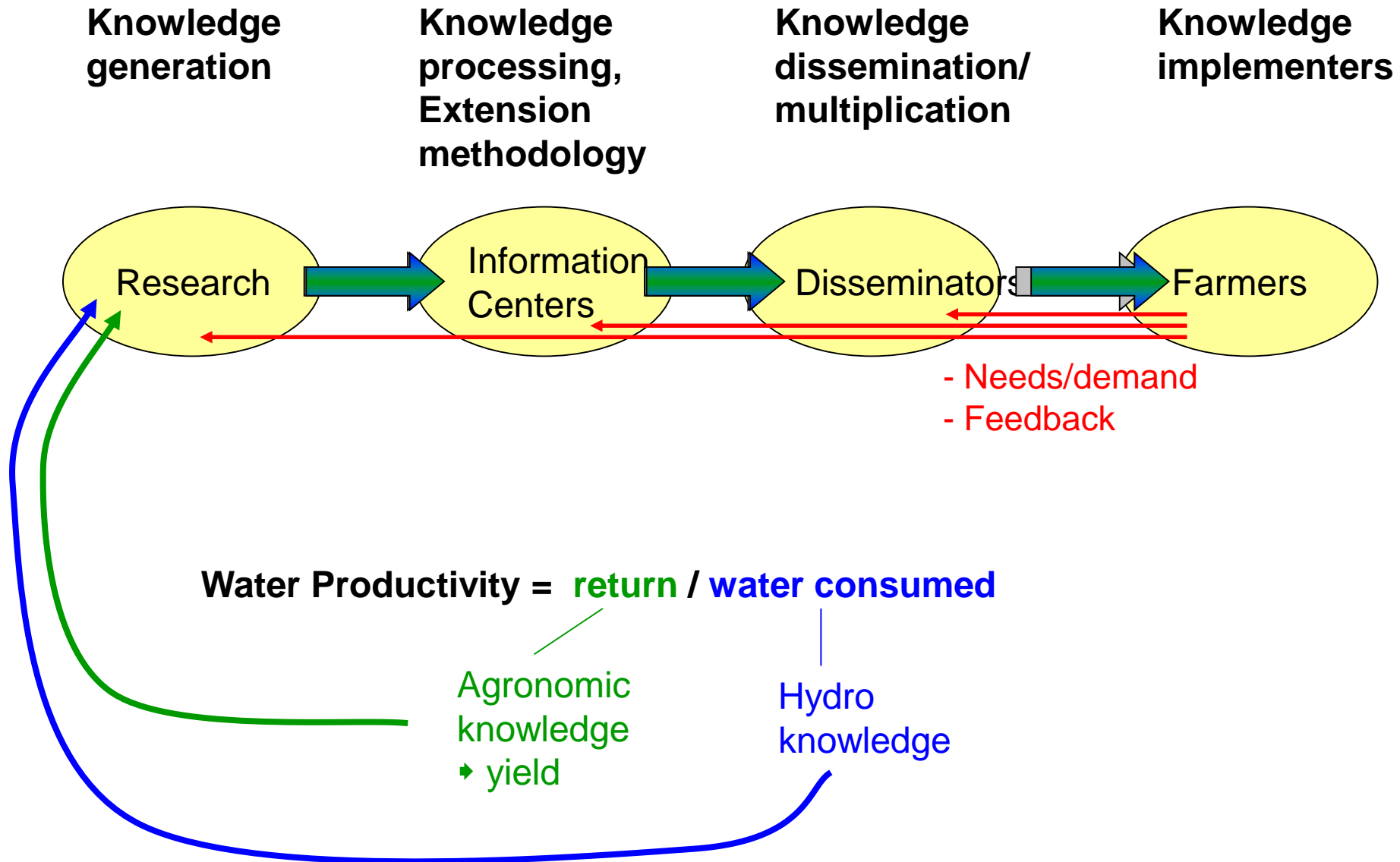
## **Outputs:**

- Overview report of the implemented projects (2012-2017)
- Data-base on the conditions of irrigated lands on the sub-basin level
- Analytical GIS/RS maps: used by stakeholders including for decision-support
- Agroeconomic model
- Methodologies for uptake and use of innovative approaches and technologies for the different levels of uses
- Work-out schema for each relevant country with regard to dissemination of knowledge and practice on the different level of users
- Recommendations on the national level for the decision makers as well as uses on rational use of water resources
- Inputs for Basin Planning
- Report on impacts of the project at the sub-basin level

# Results

- Increase of the food security
- Creation of the additional working places, increase of the living standards as well as decrease of migration flows
- Improvement of the ameliorative conditions for 20-25%
- Increase of the irrigated land areas where will be applied water-energy saving technologies of irrigation

# ACTORS IN THE INNOVATION SYSTEM



# Partners:

- Kazakh Scientific-Research Institute of Irrigation. City Taraz, Kazakhstan
- RGU, South-Kazakhstan Hydrogeology-amelioration Expedition of Water Committee of Republic of Kazakhstan. City Shymkent, Kazakhstan
- Kyrgyz Scientific-Research Institute of Irrigation, city Bishkek, Kazakhstan
- Tajikistan Institute of Water Problems under Academy of Sciences
- Sub-regional Office of ICBA for CA; city Tashkent, Uzbekistan
- Sub-regional Office of IWMI for Central Asia, city Tashkent, Uzbekistan

И другие партнеры:

GFZ German Research Center, USDA, USGS, NASA (GIS/RS)